

SEQUENCE LISTING

<110> Hirochika, Hirohiko
Miyao, Akio
Kazumasa Murata

<120> A NOVEL GENE FOR CONTROLLING LEAF SHAPES

<130> YAM 2 0005; F5-0069415/AR021US

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<150> JP 2000-83067

<151> 2000-03-23

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gat | gag | gtc | ggt | gag | ccc | gac | acg | acg | agg | gac | agg | atg | ctg | ctg | gag | 326 |
| Asp | Glu | Val | Gly | Glu | Pro | Asp | Thr | Thr | Arg | Asp | Arg | Met | Leu | Leu | Glu | |
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| Leu | Glu | Gln | Glu | Cys | Leu | Glu | Val | Tyr | Arg | Arg | Lys | Val | Asp | Gln | Ala | |
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| gag | ctc | gcc | ggc | atc | tgc | tca | gcc | atg | ggc | gag | ccg | ccc | gtg | cac | gtt | 470 |
| Glu | Leu | Ala | Gly | Ile | Cys | Ser | Ala | Met | Gly | Glu | Pro | Pro | Val | His | Val | |
| | | | 80 | | | | | 85 | | | | | | 90 | | |
| aga | cag | tca | aat | cag | aag | ctt | cat | ggc | tta | aga | gag | gag | ttg | aat | gca | 518 |
| Arg | Gln | Ser | Asn | Gln | Lys | Leu | His | Gly | Leu | Arg | Glu | Glu | Leu | Asn | Ala | |
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| gac | ctg | tca | tta | aga | aag | ctt | gat | gag | ttg | acg | aag | gac | ctg | gna | tcc | 710 |
| Asp | Leu | Ser | Leu | Arg | Lys | Leu | Asp | Glu | Leu | Thr | Lys | Asp | Leu | Xaa | Ser | |
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| ctt | cag | aag | gag | aag | agc | gat | cgg | cta | aag | caa | gtg | ata | gaa | cat | ttg | 758 |
| Leu | Gln | Lys | Glu | Lys | Ser | Asp | Arg | Leu | Lys | Gln | Val | Ile | Glu | His | Leu | |
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| Asn | Ser | Leu | His | Ser | Leu | Cys | Glu | Val | Leu | Gly | Ile | Asp | Phe | Lys | Gln | |
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| aca | gta | tat | gag | gtg | cac | cct | agc | ttg | gac | gaa | gct | gaa | gga | tca | aag | 854 |
| Thr | Val | Tyr | Glu | Val | His | Pro | Ser | Leu | Asp | Glu | Ala | Glu | Gly | Ser | Lys | |
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| | | | | | | | | | | | | | | | | |
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| ctg | cgt | gaa | atg | aag | atc | caa | agg | atg | caa | aag | ctt | caa | gat | ttt | gct | 950 |
| Leu | Arg | Glu | Met | Lys | Ile | Gln | Arg | Met | Gln | Lys | Leu | Gln | Asp | Phe | Ala | |
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| tct | agc | atg | ctc | gag | cta | tgg | aat | ctc | atg | gat | act | cca | ctt | gaa | gag | 998 |
| Ser | Ser | Met | Leu | Glu | Leu | Trp | Asn | Leu | Met | Asp | Thr | Pro | Leu | Glu | Glu | |
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| cag | cag | atg | ttt | cag | aat | ata | aca | tgc | aat | att | gct | gct | tca | gaa | caa | 1046 |
| Gln | Gln | Met | Phe | Gln | Asn | Ile | Thr | Cys | Asn | Ile | Ala | Ala | Ser | Glu | Gln | |
| | | 270 | | | | | 275 | | | | | 280 | | | | |
| gag | ata | act | gaa | cca | aac | acc | ctc | tcc | aca | gat | ttc | ctg | aat | tat | gtc | 1094 |
| Glu | Ile | Thr | Glu | Pro | Asn | Thr | Leu | Ser | Thr | Asp | Phe | Leu | Asn | Tyr | Val | |
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| gaa | tct | gag | gtg | tta | agg | ctt | gaa | caa | ctg | aaa | gca | agt | aag | atg | aaa | 1142 |
| Glu | Ser | Glu | Val | Leu | Arg | Leu | Glu | Gln | Leu | Lys | Ala | Ser | Lys | Met | Lys | |
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| gat | ctt | gtt | tta | aaa | aag | aaa | gca | gaa | cta | gaa | gag | cat | aga | aga | cgt | 1190 |
| Asp | Leu | Val | Leu | Lys | Lys | Lys | Ala | Glu | Leu | Glu | Glu | His | Arg | Arg | Arg | |
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| gct | cat | ctt | gtt | ggc | gag | gaa | ggc | tat | gca | gag | gag | ttt | agc | att | gaa | 1238 |
| Ala | His | Leu | Val | Gly | Glu | Glu | Gly | Tyr | Ala | Glu | Glu | Phe | Ser | Ile | Glu | |
| | | | 335 | | | | | 340 | | | | | 345 | | | |
| gct | att | gaa | gct | gga | gct | att | gat | ccc | tca | cta | gta | ctt | gaa | caa | att | 1286 |
| Ala | Ile | Glu | Ala | Gly | Ala | Ile | Asp | Pro | Ser | Leu | Val | Leu | Glu | Gln | Ile | |
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| gaa | gct | cac | att | gca | aca | gtg | aaa | gag | gaa | gct | ttt | agc | cgg | aag | gat | 1334 |
| Glu | Ala | His | Ile | Ala | Thr | Val | Lys | Glu | Glu | Ala | Phe | Ser | Arg | Lys | Asp | |
| | 365 | | | | | 370 | | | | | 375 | | | | | |
| att | ctt | gag | aaa | gtt | gaa | aga | tgg | caa | aat | gct | tgt | gaa | gag | gaa | gcc | 1382 |
| Ile | Leu | Glu | Lys | Val | Glu | Arg | Trp | Gln | Asn | Ala | Cys | Glu | Glu | Glu | Ala | |
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| tgg | ctg | gaa | gat | tac | aac | aaa | gat | gat | aat | cgt | tac | aat | gct | ggg | agg | 1430 |
| Trp | Leu | Glu | Asp | Tyr | Asn | Lys | Asp | Asp | Asn | Arg | Tyr | Asn | Ala | Gly | Arg | |
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| gga gca cat cta aca cta aag agg gct gaa aag gct cgt act ttg gtc | 1478 |
| Gly Ala His Leu Thr Leu Lys Arg Ala Glu Lys Ala Arg Thr Leu Val | |
| 415 420 425 | |
| aac aag att cct gga atg gta gat gtt ttg aga aca aaa att gct gca | 1526 |
| Asn Lys Ile Pro Gly Met Val Asp Val Leu Arg Thr Lys Ile Ala Ala | |
| 430 435 440 | |
| tgg aaa aat gaa cga gga aag gag gat ttc aca tat gat ggt gtt agc | 1574 |
| Trp Lys Asn Glu Arg Gly Lys Glu Asp Phe Thr Tyr Asp Gly Val Ser | |
| 445 450 455 | |
| ctt tcg tca atg ctt gat gaa tat atg ttc gtt cgt cag gag aaa gag | 1622 |
| Leu Ser Ser Met Leu Asp Glu Tyr Met Phe Val Arg Gln Glu Lys Glu | |
| 460 465 470 475 | |
| caa gag aag aag aga caa agg gat cag aag aag ctc cag gat cag ctc | 1670 |
| Gln Glu Lys Lys Arg Gln Arg Asp Gln Lys Lys Leu Gln Asp Gln Leu | |
| 480 485 490 | |
| aaa gcg gag cag gaa gct ttg tac gga tca aaa ccc agt cca tcc aag | 1718 |
| Lys Ala Glu Gln Glu Ala Leu Tyr Gly Ser Lys Pro Ser Pro Ser Lys | |
| 495 500 505 | |
| ccc cta agt aca aag aag gca cct agg cac tct atg ggt ggt gca aac | 1766 |
| Pro Leu Ser Thr Lys Lys Ala Pro Arg His Ser Met Gly Gly Ala Asn | |
| 510 515 520 | |
| cga agg cta tct ctt ggt gga gcc acc atg caa ccc ccg aag act gat | 1814 |
| Arg Arg Leu Ser Leu Gly Gly Ala Thr Met Gln Pro Pro Lys Thr Asp | |
| 525 530 535 | |
| ata ctg cat tca aag tct gtt cgt gct gcc aag aaa act gaa gaa atc | 1862 |
| Ile Leu His Ser Lys Ser Val Arg Ala Ala Lys Lys Thr Glu Glu Ile | |
| 540 545 550 555 | |
| ggc act ttg tcc cct agt agt agt aga ggt ttg gac att gcc gga ttg | 1910 |
| Gly Thr Leu Ser Pro Ser Ser Ser Arg Gly Leu Asp Ile Ala Gly Leu | |
| 560 565 570 | |
| cct atc aag aag ttg tct ttc aat gcc agt act cta cgt gag acg gag | 1958 |
| Pro Ile Lys Lys Leu Ser Phe Asn Ala Ser Thr Leu Arg Glu Thr Glu | |
| 575 580 585 | |
| aca cct cgt aaa cct ttt gct cag atc aca cca gga aac agt gtc tcg | 2006 |
| Thr Pro Arg Lys Pro Phe Ala Gln Ile Thr Pro Gly Asn Ser Val Ser | |

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| Ser Thr Pro Val Arg Pro Ile Thr Asn Asn Thr Glu Asp Asp Glu Asn | | | |
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| agg act ccg aag aca ttt aca gca ctg aat ccc aag act ccg atg act | | | 2102 |
| Arg Thr Pro Lys Thr Phe Thr Ala Leu Asn Pro Lys Thr Pro Met Thr | | | |
| 620 | 625 | 630 | 635 |
| gtt acg gct cca atg cag atg gca atg act ccc tct ctg gcc aac aag | | | 2150 |
| Val Thr Ala Pro Met Gln Met Ala Met Thr Pro Ser Leu Ala Asn Lys | | | |
| 640 | 645 | 650 | |
| gtt tca gca act cca gtt tcc ctt gtt tac gac aag cca gag gta aca | | | 2198 |
| Val Ser Ala Thr Pro Val Ser Leu Val Tyr Asp Lys Pro Glu Val Thr | | | |
| 655 | 660 | 665 | |
| ttg cag gag gac atc gac tac tcc ttt gaa gaa agg cgg ctc gcc atc | | | 2246 |
| Leu Gln Glu Asp Ile Asp Tyr Ser Phe Glu Glu Arg Arg Leu Ala Ile | | | |
| 670 | 675 | 680 | |
| tat ctg gcc agg caa atg gtt taa ctgttgatca atttatgtac gtagttgaaa | | | 2300 |
| Tyr Leu Ala Arg Gln Met Val | | | |
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| Asp | Ser | Leu | Leu | Leu | Glu | Leu | Asn | Val | Ile | Trp | Asp | Glu | Val | Gly | Glu |
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| Pro | Asp | Thr | Arg | Asp | Arg | Met | Leu | Leu | Glu | Leu | Glu | Gln | Glu | Cys | |
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| Leu | Glu | Val | Tyr | Arg | Arg | Lys | Val | Asp | Gln | Ala | Asn | Arg | Ser | Arg | Ala |

| | | | | | | | | | | | | | | | | | |
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| Gln | Leu | Arg | Lys | Ala | Ile | Ala | Glu | Gly | Glu | Ala | Glu | Leu | Ala | Gly | Ile | | |
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| Cys | Ser | Ala | Met | Gly | Glu | Pro | Pro | Val | His | Val | Arg | Gln | Ser | Asn | Gln | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | |
| Lys | Leu | His | Gly | Leu | Arg | Glu | Glu | Leu | Asn | Ala | Ile | Val | Pro | Tyr | Leu | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Glu | Glu | Met | Lys | Lys | Lys | Lys | Val | Glu | Arg | Trp | Asn | Gln | Phe | Val | His | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Val | Ile | Glu | Gln | Ile | Lys | Lys | Ile | Ser | Ser | Glu | Ile | Arg | Pro | Ala | Asp | | |
| 130 | | | | | 135 | | | | | | 140 | | | | | | |
| Phe | Val | Pro | Phe | Lys | Val | Pro | Val | Asp | Gln | Ser | Asp | Leu | Ser | Leu | Arg | | |
| 145 | | | | 150 | | | | | | 155 | | | | | 160 | | |
| Lys | Leu | Asp | Glu | Leu | Thr | Lys | Asp | Leu | Xaa | Ser | Leu | Gln | Lys | Glu | Lys | | |
| | | | 165 | | | | | 170 | | | | | | 175 | | | |
| Ser | Asp | Arg | Leu | Lys | Gln | Val | Ile | Glu | His | Leu | Asn | Ser | Leu | His | Ser | | |
| | | 180 | | | | | | 185 | | | | | 190 | | | | |
| Leu | Cys | Glu | Val | Leu | Gly | Ile | Asp | Phe | Lys | Gln | Thr | Val | Tyr | Glu | Val | | |
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| His | Pro | Ser | Leu | Asp | Glu | Ala | Glu | Gly | Ser | Lys | Asn | Leu | Ser | Asn | Thr | | |
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| Thr | Ile | Glu | Arg | Leu | Ala | Ala | Ala | Ala | Asn | Arg | Leu | Arg | Glu | Met | Lys | | |
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| Ile | Gln | Arg | Met | Gln | Lys | Leu | Gln | Asp | Phe | Ala | Ser | Ser | Met | Leu | Glu | | |
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| Asn | Ile | Thr | Cys | Asn | Ile | Ala | Ala | Ser | Glu | Gln | Glu | Ile | Thr | Glu | Pro | | |
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| Asn | Thr | Leu | Ser | Thr | Asp | Phe | Leu | Asn | Tyr | Val | Glu | Ser | Glu | Val | Leu | | |
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| Glu | Glu | Gly | Tyr | Ala | Glu | Glu | Phe | Ser | Ile | Glu | Ala | Ile | Glu | Ala | Gly | | |
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| Asn | Lys | Asp | Asp | Asn | Arg | Tyr | Asn | Ala | Gly | Arg | Gly | Ala | His | Leu | Thr | | |
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| Leu | Lys | Arg | Ala | Glu | Lys | Ala | Arg | Thr | Leu | Val | Asn | Lys | Ile | Pro | Gly | | |
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 Ala Leu Tyr Gly Ser Lys Pro Ser Pro Ser Lys Pro Leu Ser Thr Lys
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